

## CLAIMS:

1. A video transcoder (201) comprising  
means (203) for receiving a first video signal encoded in accordance with a  
first video encoding format;  
means (207) for decoding the first video signal in accordance with the first  
5 video encoding format to generate a decoded signal;  
means (209) for extracting first motion estimation data from the first video  
signal, the first motion estimation data being in accordance with the first video encoding  
format;  
means (211) for generating second motion estimation data from the first  
10 motion estimation data; the second motion estimation data being in accordance with a second  
video encoding format having a different set of motion estimation options than the first video  
encoding format; and  
means (213) for encoding the decoded signal in accordance with the second  
video encoding format using the second motion estimation data to generate a transcoded  
15 video signal.
2. A video encoder (201) as claimed in claim 1, wherein the first video encoding  
format is a first video encoding standard and wherein the second video encoding format is a  
second video encoding standard.
- 20 3. A video transcoder (201) as claimed in claim 1 wherein the second video  
encoding format comprises a different set of possible prediction block sizes than the first  
video encoding format.
- 25 4. A video transcoder (201) as claimed in claim 1 wherein the second video  
encoding format comprises a different set of possible reference pictures than the first video  
encoding format.

5. A video transcoder (201) as claimed in claim 1 wherein the second video encoding format allows for a different number of prediction blocks to be used for an encoding block than the first video encoding format.
- 5 6. A video transcoder (201) as claimed in claim 1 wherein the means (211) for generating comprises means for projecting a first motion estimation block position of a first reference picture to a second motion estimation block position in a second reference picture.
7. A video transcoder (201) as claimed in claim 6 wherein the first reference  
10 picture has a different relative position to a picture for encoding than the second reference picture.
8. A video transcoder (201) as claimed in claim 6 wherein the first reference  
15 picture is not neighbouring the picture for encoding and the second reference picture is neighbouring the picture for encoding.
9. A video transcoder (201) as claimed in claim 6 wherein the means for  
projecting is operable to perform the projection by scaling of at least one motion vector of the  
first motion estimation data to generate least one motion vector of the second motion  
20 estimation data.
10. A video transcoder (201) as claimed in claim 6 wherein the means (211) for  
generating further comprises means for aligning the second motion estimation block position  
with a block position framework of the second video encoding format.
- 25 11. A video transcoder (201) as claimed in claim 1 wherein the first video  
compensation data comprises at least a first prediction block smaller than a minimum  
prediction block size of the second video encoding format and the means (211) for generating  
is operable to select a prediction block of the second motion estimation data such that it  
30 comprises the first prediction block.
12. A video transcoder (201) as claimed in claim 1 wherein the means (211) for  
generating is operable to select a prediction block of the second motion estimation data by

grouping a plurality of prediction blocks of the first motion estimation data together in a group and to determine a single motion vector for the group.

13. A video transcoder (201) as claimed in claim 1 wherein the means (211) for  
5 generating is operable to select a prediction block of the second motion estimation data by selecting a subset of a plurality of prediction blocks of the first motion estimation data in response to prediction block sizes of the plurality of prediction blocks.
14. A video transcoder (201) as claimed in claim 1 wherein the means (213) for  
10 encoding is operable to generate the transcoded signal with a different picture size than a picture size of the decoded signal.
15. A video transcoder (201) as claimed in claim 1 wherein the means (213) for  
15 encoding is operable to generate the transcoded signal with a different picture frequency than a picture frequency of the decoded signal.
16. A method of transcoding comprising  
receiving (301) a first video signal encoded in accordance with a first video  
encoding format;  
20 decoding (303) the first video signal in accordance with the first video  
encoding format to generate a decoded signal;  
extracting (305) first motion estimation data from the first video signal, the  
first motion estimation data being in accordance with the first video encoding format;  
generating (307) second motion estimation data from the first motion  
25 estimation data; the second motion estimation data being in accordance with a second video  
encoding format having a different set of motion estimation options than the first video  
encoding format; and  
encoding (317) the decoded signal in accordance with the second video  
encoding format using the second motion estimation data to generate a transcoded video  
30 signal.
17. A computer program enabling the carrying out of a method according to claim  
16.

18. A record carrier comprising a computer program as claimed in claim 17.